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Abstract
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PLANT VIRUS GENE VECTORS FOR TRANSIENT EXPRESSION OF FOREIGN PROTEINS IN PLANTS

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• **Abstract** The development of plant virus gene vectors for expression of foreign genes in plants provides attractive biotechnological tools to complement conventional breeding and transgenic methodology. The benefits of virus-based transient RNA and DNA replicons versus transgenic gene expression include rapid and convenient engineering coupled with flexibility for expeditious application in various plant species. These characteristics are especially advantageous when very high levels of gene expression are desired within a short time, although instability of the foreign gene in the viral genome can present some problems. The strategies that have been tested for foreign gene expression in various virus-based vectors include gene replacement, gene insertion, epitope presentation, use of virus controlled gene expression cassettes, and complementation. Recent reports of the utililization of virus vectors for foreign gene expression in fundamental research and biotechnology applications are discussed.

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